



**Supplemental Figure S7. The relationship between GC-content and promoter activity.** 1,875 native core promoters were divided into two groups of “active” and “not active” according to the activity threshold defined by measurements of the empty vector. GC content was computed for promoters in each group. A significant increase in GC-content is observed for sequences with positive promoter activity ( $p < 10^{-27}$ , Wilcoxon rank-sum test).